

## PREMABRAZE<sup>®</sup> 580

### ***NOMINAL COMPOSITION***

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Silver	58.0% ± 1.0%
Copper	32.0% ± 1.0%
Palladium	Remainder
Zinc	0.001% Max
Cadmium	0.001% Max
Lead	0.002% Max
Phosphorus	0.002% Max
Carbon	0.005% Max
Other high vapor pressure elements each <sup>(1)</sup>	0.001% Max
Total all high vapor pressure elements (Including zinc, cadmium, and lead)	0.010% Max
Total all other impurity elements	0.01% Max

<sup>(1)</sup> Elements with a vapor pressure higher than 10<sup>-7</sup> Torr (1.3 x 10<sup>-5</sup> Pa) at 932°F (500°C)

### ***PHYSICAL PROPERTIES***

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Color	Silver White
Melting Point (Solidus)	1515°F (824°C)
Flow Point (Liquidus)	1565°F (852°C)
Brazing Temperature Range	1565°F - 1665°F (850°C - 907°C)
Specific Gravity	10.06
Density (Troy oz/in <sup>3</sup> )	5.30
Electrical Conductivity (%IACS) <sup>(2)</sup>	37.0
Electrical Resistivity (Microhm-cm)	4.70

<sup>(2)</sup> IACS = International Annealed Copper Standard

### ***PRODUCT USES***

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Premabraz 580 can be used on any of the common ferrous and non-ferrous alloys. Due to its low vapor pressure compared to standard silver base filler metals, Premabraz 580 is suitable for use in all vacuum applications such as electronic valve construction, and vacuum tube construction in electronic industry. Often this alloy is used in brazing of metallized ceramics to nickel-cobalt-iron assemblies. In aerospace industry, Premabraz 580 can be used in brazing of fuel line assemblies and aero-engine components.

### ***BRAZING CHARACTERISTICS***

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The palladium content in Premabraz 580 inhibits the potential of stress corrosion cracking in iron-nickel base metals in comparison to standard silver-copper alloys. Premabraz 580 exhibits high corrosion and oxidation resistance.

### ***PROPERTIES OF BRAZED JOINTS***

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The properties of a brazed joint are dependent upon the base metal, joint design and brazing technique. For controlled atmosphere brazing or vacuum brazing the recommended radial joint clearance for silver base alloys fall within 0.000 in. - 0.002 in. (0.00 mm - 0.05 mm.) range.

## ***AVAILABLE FORMS***

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Wire, strip, engineered preforms, specialty preforms per customer specification, powder and paste.

## ***SPECIFICATIONS***

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Premabraz 580 alloy conforms to the following specifications:

- American Welding Society (AWS) A5.8M/A5.8 BVAg-31 Grade 1 and Grade 2

## ***APPLICABLE PRODUCT CODE(S)***

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The applicable Lucas-Milhaupt product code(s) for Premabraz 580: 69-258.

## ***SAFETY INFORMATION***

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The operation and maintenance of brazing equipment or facility should conform to the provisions of American National Standard (ANSI) Z49.1, "Safety in Welding and Cutting". For more complete information refer to the Safety Data Sheet for Premabraz 580.

## ***WARRANTY CLAUSE***

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